

Pollution Prevention and Control Northern Ireland

Guidance for Operators on Preparing an Agricultural Energy Audit for IPPC Farming installations.

Version 2
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Northern Ireland Environment Agency
Industrial Pollution and Radiochemical Inspectorate

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Record of changes

Version	Date	Change
1	November 2010	Document created
2	January 2011	Energy Audit included as a separate template

Contents

Introduction	iv
Section 1 – Installation Details	iv
Section 2 – Energy Consumption and Production	iv
Section 3 – Significant Changes	v
Section 4 – Details of energy from renewable sources	v
Section 5 – Energy Efficiency Assessment.....	v
Section 6 – Assessment of current systems	v
Section 7 – Results of the Assessment	v
Appendix 1.....	1

Introduction:

Under condition 2.6.1 of PPC Intensive Agriculture Permits linked to NIEA's Standard Farming Installation Rules (SFIR) operators are required to submit a systematic assessment of energy consumption. This assessment is due within three years of the issue of the Permit and then every 3 years thereafter. The purpose of this assessment is to encourage operators to optimise energy use and thereby limit their impact on the environment as a whole. Reducing energy use should also have cost advantages for your business and help competitiveness.

Specifically the condition states that

"The operator shall:

- a) *Take appropriate measures to ensure that energy is used efficiently in the activities;*
- b) *Undertake an energy audit if required within 3 years of the effective date of the permit in order to identify whether there are suitable opportunities to improve the energy efficiency of the activities, as referred to in improvement condition [IMPX] and make available to the Chief Inspector on request thereafter. The audit shall be reviewed at least every 3 years; and*
- c) *Implement any appropriate measures identified in the audit."*

What you should do now:

Please read the following guidance notes and complete the form in Appendix 1. You should submit the form by either e-mail or post to the address given on page ii. Please retain a copy of the completed form for your records. Submit ONLY the form in Appendix 1 – this guidance section should be kept for you own information.

Please contact the Inspectorate should you need assistance or wish to discuss any aspect of this form.

Section 1 – Installation Details

These details will allow the installation, for which the audit is being completed, to be clearly identified.

Section 2 - Energy Consumption and production

Please record the amount of energy you have used on your installation against your production. If you do not have accurate records please indicate and use an estimate. See notes below for guidance on completion.

Notes

- You can base your figures on any 12 month period (please specify the dates at the top of each column).
- Please state the units you are reporting in clearly.
- If you do not use a particular source please indicate that it is not applicable.
- Compare your energy consumption with benchmarks for your production system. Benchmark figures may be available for your sector from your contract company or trade association.
- Where your consumption is above the typical industry level, then you should consider adopting some energy efficiency measures. Where consumption is below typical industry levels, although further reductions may be harder to achieve they should still be assessed.
- **The "cost" figure does not need to be completed on the form submitted to NIEA. However it may be useful business practice to record this information for your own records.**

If this is the first report you have completed you only need provide details for the period in which you have had your Permit although you can extend beyond this if you wish. Subsequent reports should cover the three year period since your last submission.

Section 3 - Detail any significant changes to your production system?

If you have made any significant change to your operation in the time covered by this report please summarise in Section 3.

Section 4 – Details of energy used from renewable sources?

If any of the energy used on the installation is supplied either directly or indirectly from a renewable source (e.g. wind generation of electricity) give details in Section 4.

Section 5 - Assessment of Energy Saving Measures

It is hoped that in addition to ensuring permit compliance operators will also see this as an opportunity to save money through the efficient use of energy.

In the table in Section 5 you will be asked to consider a series of measures that could be employed on your farm to cut your energy use and lower bills. Most questions relate back to one of three guidance documents produced by the Carbon Trust¹.

- Energy use in pig farming (ECG089)
- Poultry meat production factsheet (detailed advice for poultry meat producers)
- Egg production fact sheet (detailed advice for egg producers)

Please indicate in the appropriate boxes the measures you currently employ. If you answer “No” to any of the following you may be wasting money. Please note that all of the Carbon Trust documents provide useful information for operators regardless of whether your business relates to pigs or poultry, we would recommend that you look through each of them.

Having read the appropriate guidance you should begin by inspecting your activities in detail with a view to identifying where you may be wasting energy and money.

¹ The Carbon Trust is a government funded body who may be able to assist you in improving the energy efficiency of your business. In addition to other services the Carbon Trust provides interest free loans and free energy surveys (qualifying criteria apply). You can contact the Carbon Trust on tel. (0800) 0852005 or by visiting their website at www.carbontrust.co.uk.

Section 6 - Assessment of current systems

Having read the guidance and carried out your inspection are you confident that the techniques you are using on the farm are not wasting energy and costing you money? Are you using the best techniques available to you?

If you have ticked “NO” in any of the boxes in Section 5 there is likely to be an opportunity for you to become more energy efficient. Operators should look into each of these and identify those which are likely to be a viable proposition on their operation.

Section 7 - Results of the assessment

Having assessed the viability of opportunities you have identified to save energy of saving energy (those actions to which you responded “NO” in the table above). Please **summarise** your findings and decisions for each question in the tables in section 7. If you require additional boxes copy and paste additional tables (electronic version) or photocopy Section 7 (hard copy).

Appendix 1

Please retain the guidance section (pages i to v) for your own information and submit the audit (pages 1 to 4).

Energy Audit

Section 1 – Installation Details.

Permit Number:
Operator:
Name of Installation:

Section 2 - Energy Consumption and production

Date monitoring started		Date monitoring ended			
	Units	Production ie. total number of birds, pigs, etc.	Energy Units per Production Unit (e.g. per 1000 birds, per pig etc)	Benchmark	Cost (see note below)
Electricity					
Gas					
Oil					
Other (specify)					

Section 3 - Detail any significant changes to your production system?

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Section 4 – Details of energy used from renewable sources?

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Section 5 - Energy Efficiency Assessment

	Energy Saving measures	Yes	No	N/A
1	Do you monitor your energy use regularly?			
2	Do you carry out appropriate maintenance and cleaning of ventilation systems and control sensors?			
3	Do you check the accuracy of controls?			
4	Do you use information from your control system?			
5	Are heated/ventilated buildings insulated to recommended standards?			
6	Do you use enclosed creeps? (pigs only)			
7	Are your heating and ventilation controls optimised?			
8	Do you use efficient fans and ducts?			
9	Is all your lighting low energy lighting?			
10	Do you use high efficiency motors and variable speed drives on feed and waste handling systems?			
11	Do you apply natural ventilation where possible?			
12	Are you buildings sealed to prevent draughts?			
13	Do you use high efficiency boilers?			
14	Do you switch off any unnecessary lights when not in use?			
15	Are your heating pipes lagged?			
16	Do you use heat recovery?			
17	Have you minimised the space to be heated/ ventilated?			

Section 7 - Results of the assessment

Question number
Outline the problem with your current system -
Possible improvements identified -
Estimated Costs of improvement
Estimated payback time
Decision and Justification -

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Outline the problem with you current system -
Possible improvements identified -
Estimated Costs of improvement
Estimated payback time
Decision and Justification -

Section 8 – Contents of this submission

It is an offence under Regulation 33 of the Pollution Prevention and Control Regulations (Northern Ireland) 2003 to:

- Make a statement which you know to be false or misleading in a material particular
- Recklessly make a statement which is false or misleading in a material particular, where that statement is made in purported compliance with a requirement to furnish any information imposed by or under any provision of the Regulations.

Name:

Signature:

Date: